IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, *et al.*, Plaintiffs, v. MICHAEL REGAN, *et al.*, Defendants, and AMERICAN FARM BUREAU FEDERATION, *et al.*, Intervenor-Defendants.	)	Case No. 2:20-cv-01687-BHH

BRIEF OF AMERICAN FISHERIES SOCIETY, ASSOCIATION FOR THE SCIENCES OF LIMNOLOGY AND OCEANOGRAPHY, COASTAL AND ESTUARINE RESEARCH FEDERATION, INTERNATIONAL ASSOCIATION FOR GREAT LAKES RESEARCH, NORTH AMERICAN LAKE MANAGEMENT SOCIETY, PHYCOLOGICAL SOCIETY OF AMERICA, SOCIETY FOR ECOLOGICAL RESTORATION, SOCIETY FOR FRESHWATER SCIENCE, AND SOCIETY OF WETLAND SCIENTISTS AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT

Table of Contents

Page

Table of Authorities

Page(s)

Cases

Statute

Administrative Authorities

Other Authorities

INTEREST OF THE *AMICI CURIAE*[1]

Amici curiae[2] are nine national and international scientific societies, all actively involved in research, education, and the conservation and restoration of aquatic ecosystems and resources in the United States. *Amici* have an interest in this case because of the impact of the Navigable Waters Protection Rule, 85 Fed. Reg. 22,250 (Apr. 21, 2020), on the integrity of those ecosystems, their biodiversity, and their resources. As scientific societies, *amici* support the use of the best available scientific information in making decisions on the use and management of aquatic ecosystems and resources.

Amici's interest here is not to make a policy argument, argue for a particular rulemaking outcome, or compel the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers (together, the Agencies) to provide "*all* of the benefits for water quality the science suggests might be achievable." *California v. Wheeler*, 467 F. Supp. 3d 864, 875 (N.D. Cal. 2020) (emphasis in original). Their interest rather stems from the mandate of *Motor Vehicle Manufacturers Ass'n of the United States v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29 (1983), which requires that the Agencies properly consider the scientific evidence that existed in the administrative record. *Amici* seek to explain how the Agencies failed to consider

[1] Plaintiffs consent to and Defendants and Intervenor-Defendants take no position regarding the filing of this brief. *Amici curiae* state that no counsel for a party authored this brief in whole or in part, that no party or party's counsel made a monetary contribution intended to fund the preparation or submission of this brief, and that no person—other than *amici curiae*, their members, or their counsel—made a monetary contribution intended to fund the preparation or submission of this brief.

[2] *Amici curiae* are American Fisheries Society, Association for the Sciences of Limnology and Oceanography, Coastal and Estuarine Research Federation, International Association for Great Lakes Research, North American Lake Management Society, Phycological Society of America, Society for Ecological Restoration, Society for Freshwater Science, and Society of Wetland Scientists. Descriptions of the scientific societies are provided in Appendix A to this brief.

perhaps the most important aspect of the problem sought to be addressed—the jurisdictional reduction their action has on the Nation's waters—not because a mechanism for obtaining such evidence did not exist, but because the Agencies largely ignored the mechanisms that did.

SUMMARY OF ARGUMENT

When conducting a rulemaking, an agency must consider important aspects of the problem it is addressing. In promulgating the Navigable Waters Protection Rule (2020 Rule), the Agencies failed to address the extent to which the 2020 Rule removes Clean Water Act protections from a large percentage of the Nation's waters. The Agencies claim that, as a matter of law, they were not required to assess the decline in jurisdiction and the resulting loss of water quality and ecosystem services those waters provide. The Agencies also claim that, as a factual matter, it was too difficult to estimate the number of waters that the 2020 Rule removes from Clean Water Act protection. They are wrong on both claims. Under *State Farm* and EPA's own regulations, the Agencies were required to assess the decline in jurisdiction and the resulting loss of water quality and ecosystem services those waters provide. Additionally, they were required to consider, and not simply ignore, the data and scientific tools available to them. This brief highlights some of those tools and data that were part of the rulemaking record and that demonstrated the negative impact the 2020 Rule will have on the Nation's waters. For example, in some western watersheds, the 2020 Rule likely eliminates Clean Water Act coverage for up to 95% of the total stream and river kilometers and up to 72% of the total wetland area.

The 2020 Rule's reduction of Clean Water Act protection threatens irreparable harm to every American who benefits from and relies upon the integrity of the Nation's waters. Instead of properly considering the magnitude of their actions, the Agencies claimed over and over again that they were "unable to quantify" many critical metrics. The Agencies acted arbitrarily and

capriciously and not in accordance with law by failing to inform themselves—and the public—about the 2020 Rule's significant negative effects.

ARGUMENT

I. The Agencies had a legal obligation to consider available science regarding the magnitude of the 2020 Rule's reduction in Clean Water Act jurisdiction and failed to do so.

A bedrock tenet of administrative law is that, when engaging in rulemaking, an agency must examine relevant data and provide a reasoned explanation for its decision. *State Farm*, 463 U.S. at 43. The U.S. Supreme Court recently reaffirmed that "[t]his requirement allows courts to assess whether the agency has promulgated an arbitrary and capricious rule by 'entirely fail[ing] to consider an important aspect of the problem [or] offer[ing] an explanation for its decision that runs counter to the evidence before [it].'" *Little Sisters of the Poor Saints Peter & Paul Home v. Pennsylvania*, 140 S. Ct. 2367, 2383–84 (2020) (quoting *State Farm*, 463 U.S. at 43). Disregarding *State Farm*, the Agencies explicitly refused to consider the available science concerning the magnitude of loss of jurisdictional waters under the 2020 Rule.[3]

A. The Agencies conceded that they did not take into account the magnitude of the loss of jurisdictional waters caused by the 2020 Rule.

In a preliminary injunction hearing in the U.S. District Court for the Northern District of California, the Agencies boldly and wrongly asserted that they were not required to consider the magnitude of the reduction in Clean Water Act jurisdiction as part of the rulemaking process:

[3] While this brief focuses on the Agencies' failure to consider scientific evidence of the magnitude of loss of jurisdictional waters under the 2020 Rule, the 2020 Rule's scientific defects go much deeper. As the EPA's own Scientific Advisory Board concluded, the "scientific basis" for the proposed 2020 Rule "is lacking." Letter from Dr. Michael Honeycutt, Chair, Science Advisory Board, to Andrew R. Wheeler, Administrator, U.S. EPA, Commentary on the Proposed Rule Defining the Scope of Waters Federally Regulated Under the Clean Water Act 4 (Feb. 27, 2020) [hereinafter "SAB Commentary"].

> THE COURT: … Does part of that process require the agencies to do some assessment of what -- what waters would have been protected under the existing regime and what will be lost under 2020? Do they have -- is that part of their process, or are they not required to do that?
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> * * *
>
> THE COURT: Okay. So I take it your answer is they're not required to do it as part of their --
>
> MR. BRIGHTBILL: They're not required to do it, Your Honor.

Tr. Videoconference Proceedings 50–51, *California v. Wheeler*, 467 F. Supp. 3d 864 (N.D. Cal. 2020). The Agencies' position here is not a mere "policy disagreement"—it is in direct conflict with the mandate of *State Farm*.

B. The Agencies ignored their own regulations when they failed to take into account the magnitude of the loss of jurisdictional waters caused by the 2020 Rule.

The Agencies' position is also in direct conflict with the EPA's own regulations, which were in force at the time of the rulemaking and identify the types of impacts the Agency must analyze when developing and issuing a regulation, such as the 2020 Rule. 40 C.F.R. § 6.101 (2020). Generally, the EPA must consider "[t]he environmental impacts of the proposed action and alternatives[.]" *Id.* § 6.205(e)(iv). More specifically, the EPA must consider impacts to "environmentally important natural resource areas such as wetlands, floodplains, significant agricultural lands, aquifer recharge zones, coastal zones, barrier islands, wild and scenic rivers, and significant fish or wildlife habitat." *Id.* § 6.204(b)(5).[4] The Agencies failed to do so here.

[4] The Agencies' action also is inconsistent with their National Environmental Policy Act (NEPA) obligations. NEPA requires agencies to "study, develop, and describe appropriate alternatives" to a proposed rule. 42 U.S.C. § 4332(E) (2018); *see also Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1229 (9th Cir. 1988) (explaining that "the consideration of alternatives requirement is both independent of, and broader than, the EIS requirement" (which the EPA was not required to perform)). In *Municipality of Anchorage v. United States*, the U.S. Court of Appeals for the

C. The Agencies failed to consider an important aspect of a problem when they failed to quantify the magnitude of the loss of jurisdictional waters caused by the 2020 Rule.

Instead of properly analyzing and quantifying the impacts the 2020 Rule would have on natural resources, the Agencies repeatedly claimed that they were "unable to quantify" the change in jurisdictional coverage for at least seven separate categories of waters: tributaries, ephemeral streams, wetlands, lakes, ponds, impoundments, and interstate waters. For example, the Agencies asserted the following:

- "[T]he agencies are not aware of any means to quantify changes in CWA jurisdiction with any precision that may or may not occur as a result of this final rule." Preamble to the 2020 Rule, 85 Fed. Reg. at 22,332.
- "[T]he agencies also did not use the NHD [National Hydrography Dataset] or NWI [National Wetlands Inventory] to assess potential changes in jurisdiction as a result of the final rule." Preamble to the 2020 Rule, 85 Fed. Reg. at 22,329.
- "[T]he agencies are not aware of any map or dataset that accurately or with any precision portrays the scope of CWA jurisdiction at any point in the history of this complex regulatory program." Preamble to the 2020 Rule, 85 Fed. Reg. at 22,332.
- "[T]he agencies lack sufficient data to quantify the difference" of jurisdictional interstate waters under the 2019 Rule (Definition of "Waters of the United States"—Recodification of Pre-Existing Rules, 84 Fed Reg. 56,626 (Oct. 22, 2019)) and the 2020 Rule. U.S. EPA & Dep't of the Army, *Resource and Programmatic Assessment for the Navigable Waters Protection Rule: Definition of "Waters of the United States"* 20 (Jan. 23, 2020) [hereinafter "Resource and Programmatic Assessment"].
- The agencies are "unable to quantify the change in jurisdiction for tributaries[.]" Resource and Programmatic Assessment at 22.
- The agencies are "unable to approximate what percentage of currently jurisdictional non-relatively permanent waters are ephemeral that will no longer be jurisdictional under the

Ninth Circuit observed, in prescient fashion, that the EPA should not be completely exempted from NEPA because "it cannot be assumed that EPA will always be the good guy." 980 F.2d 1320, 1328 (9th Cir. 1992) (internal quotation marks omitted). The EPA's NEPA regulations expressly state that the EPA's "development and issuance of regulations" are proposed actions subject to NEPA. 40 C.F.R. § 6.101.

revised definition of 'waters of the United States.'" Resource and Programmatic Assessment at 22–23.

- The agencies are "unable to quantify" how many lakes and ponds will no longer be protected. Resource and Programmatic Assessment at 24.

- The agencies are "unable to quantify" the change in jurisdiction of impoundments compared to the baseline. Resource and Programmatic Assessment at 25.

- The agencies are "unable to quantify" how many wetlands will no longer be protected. Resource and Programmatic Assessment at 26–27.

- The agencies are "unable to . . . determine how many waters have been determined to meet an exclusion from the definition of 'waters of the United States' under the 2019 Rule/*Rapanos* Guidance practice and are unable to quantify the magnitude of the changes in jurisdiction due to these exclusions." Resource and Programmatic Assessment at 30.

- The agencies are "unable to quantify potential changes in jurisdiction as a result of the final rule's ditch exclusion." Resource and Programmatic Assessment at 30.

- The agencies are "unable to quantify this change" for artificial lakes and ponds. Resource and Programmatic Assessment at 33.

- The agencies are "unable to quantify this change" for exclusions of "stormwater control features constructed in upland or in non-jurisdictional waters that convey, treat, infiltrate, or store stormwater run-off." Resource and Programmatic Assessment at 33.

- The agencies are "unable to quantify this change" for exclusions of "groundwater recharge, water reuse, and wastewater recycling structures." Resource and Programmatic Assessment at 33–34.

- "As discussed further in this document, the final rule reduces the scope of federal CWA jurisdiction over certain waters (e.g., some ephemeral streams, isolated wetlands, and ditches) compared to prior regulations, although the agencies are unable to quantify these changes with any reliable accuracy." U.S. EPA & Dep't of the Army, *Economic Analysis for the Navigable Waters Protection Rule: Definition of "Waters of the United States"* xi (Jan. 22, 2020).

Despite *State Farm*'s requirements, EPA's own regulations, and the arsenal of tools and data available in the rulemaking record (some of which are highlighted below), the Agencies made no meaningful attempt to quantify the contraction of the Clean Water Act's jurisdiction. At

a minimum, the Agencies failed to consider a critically important aspect of the problem—the magnitude of the 2020 Rule's effect on jurisdictional waters.

State Farm instructs that an agency action must be set aside as arbitrary and capricious if the agency fails "to consider an important aspect of the problem." 463 U.S. at 43. The potential harms of an agency's action are an important aspect of the problem. *Sec. Point Holdings, Inc. v. Transp. Sec. Admin.*, 769 F.3d 1184, 1188 (D.C. Cir. 2014) (vacating agency order where agency failed to consider potential harms of its changes); *Stewart v. Azar*, 313 F. Supp. 3d 237, 263 (D.D.C. 2018) (vacating Health and Human Services Secretary's waiver of several requirements of expanded Medicaid because "[f]or starters, the Secretary never once *mentions* the estimated 95,000 people who would lose coverage, which gives the Court little reason to think that he seriously grappled with the bottom-line impact on healthcare" (emphasis in original)). Yet, as just noted, the Agencies professed an inability to quantify the 2020 Rule's impacts in a meaningful way more than a dozen times—despite the scientific tools highlighted in the rulemaking record.

II. The Agencies ignored a GIS-based model that estimates the extent to which certain waters would lose protection under the 2020 Rule.

Scientific tools, in fact, were available for the Agencies to assess the impact of the 2020 Rule. For example, in January 2019, well before the Agencies promulgated the 2020 Rule, GeoSpatial Services (GSS) of Saint Mary's University of Minnesota developed a Geographic Information System (GIS)-based model, called the "CWA Jurisdictional Scenario Model," that compares the extent of Clean Water Act protection for aquatic ecosystems under different

regulatory scenarios.[5] The CWA Jurisdictional Scenario Model was developed in collaboration with an advisory group composed of "experts who have a working understanding of the [Clean Water Act and its regulations], wetland functional assessment, and spatial analysis techniques."[6] At least 16 comment letters, representing a range of states and organizations (including plaintiff National Wildlife Federation), referenced and/or attached the CWA Jurisdictional Scenario Model in response to the request for comments on the proposed 2020 Rule.[7]

The CWA Jurisdictional Scenario Model uses nationally available GIS datasets,

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[5] Roger Meyer & Andrew Robertson, *Clean Water Rule Spatial Analysis: A GIS-based Scenario Model for Comparative Analysis of the Potential Spatial Extent of Jurisdictional and Non-Jurisdictional Wetlands* ix, 1 (2019), https://static1.squarespace.com/static/578f93e4cd0f68cb49ba90e1/t/5c50c0e988251bc68fe33388/1548796144041/Hewlett_report_Final.pdf [hereinafter "GSS Report"]. GIS is a conceptualized, computerized framework commonly used by researchers since the 1990s to capture and analyze spatial and geographic data. *See* Nigel Waters, *History of GIS, in The International Encyclopedia of Geography: People, the Earth, Environment, and Technology* 2978, 2985–86 (Douglas Richardson et al. eds., 2017).

[6] GSS Report, *supra*, at 5. The model uses ArcGIS ModelBuilder, a standard software system used to model hydrological interactions in the GIS environment. *Id.* at 7. As the GSS Report notes, "ModelBuilder is a visual programming interface that can be used for building geoprocessing workflows or models. These geoprocessing models automate and document the spatial analysis process, providing a transparent and effective way to document and distribute processing methods." *Id.*

[7] *See, e.g.*, Comment submitted by Jan Goldman-Carter, Senior Counsel, Wetlands and Water Resources, National Wildlife Federation, 78 nn.122–123, attachment 2 (Apr. 15, 2019); Comment submitted by Barbara D. Underwood, Attorney General of New York, et al., attachment A at 21 (Apr. 15, 2019) (submission by 15 Attorneys General); Comment submitted by Jared Polis, Governor, State of Colorado, and Philip J. Weiser, Attorney General, State of Colorado, 2 n.2 (Apr. 15, 2019); Comment submitted by Jon Devine, Senior Attorney & Director of Federal Water Policy, Nature Program, Natural Resources Defense Council, 37 & n.91, app. A – pt. 5 (Apr. 15, 2019); and Comment submitted by Jennifer Chavez, Staff Attorney, Earth Justice, et al., on behalf of Aaron Isherwood, Phillip S. Berry Managing Attorney, Sierra Club, et al., 26–27 & n.44, 49 & nn.71–72, exhibit G-25 (Apr. 15, 2019). The comments may be viewed in the rulemaking docket for the 2020 Rule, which is available at EPA, *Revised Definition of "Waters of the United States,"* Regulations.gov, https://www.regulations.gov/docket?D=EPA-HQ-OW-2018-0149 (last visited May 25, 2021).

including the National Hydrography Dataset (NHD),[8] National Wetlands Inventory (NWI),[9] and Soil Survey Geographic Database (SSURGO),[10] and allows users to compare potential jurisdiction of aquatic ecosystems for different regulatory scenarios. GSS Report, *supra*, at ix–x, 11. The model provides a user interface for modifying model input parameters for exploratory analysis, and it is "easily transferable to other geographic areas and watersheds." *Id.* at 11.

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[8] The U.S. Geological Survey (USGS) produced the NHD, which provides digital vector GIS data from across the nation to "define the spatial locations of surface waters" at medium resolution (1:100,000 scale) or high resolution (1:24,000 scale or better). USGS, *What Is the National Hydrography Dataset (NHD)?*, https://www.usgs.gov/faqs/what-national-hydrography-dataset-nhd?qt-news_science_products=0#qt-news_science_products (last visited May 25, 2021); USGS, *National Hydrography, National Hydrography Dataset*, https://www.usgs.gov/core-science-systems/ngp/national-hydrography/national-hydrography-dataset?qt-science_support_page_related_con=0#qt-science_support_page_related_con (last visited May 25, 2021). The National Map Download viewer allows users to access NHD data by state or hydrologic unit code subbasin. USGS, *The National Map - Data Delivery*, https://viewer.nationalmap.gov/basic/?basemap =b1&category=nhd&title=NHD%20View (last visited May 25, 2021). High-resolution NHD is the best nationally available source for surface water data. *See* GSS Report, *supra*, at 11; *see also* The Navigable Waters Protection Rule: Definition of "Waters of the United States," 85 Fed. Reg. at 22,329.

[9] The U.S. Fish and Wildlife Service manages the NWI dataset, which "is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of US wetlands." U.S. Fish & Wildlife Serv., *National Wetlands Inventory*, https://www.fws.gov/wetlands/ (last updated May 3, 2021). The NWI Wetlands Mapper application allows users to download the NWI data. *See* U.S. Fish & Wildlife Serv., *National Wetlands Inventory, Wetlands Mapper*, https://www.fws.gov/wetlands/data/Mapper.html (last updated May 3, 2021). NWI is the best nationally available source for wetland data. *See* Qiusheng Wu, *GIS and Remote Sensing Applications in Wetland Mapping and Monitoring*, *in Comprehensive Geographic Information Systems* 140, 147 (2018); *see also* The Navigable Waters Protection Rule: Definition of "Waters of the United States," 85 Fed. Reg. at 22,329.

[10] The Natural Resources Conservation Service produces the SSURGO, which is a digital soils database that "is intended for natural resource planning and management." Natural Res. Conservation Serv., *Description of SSURGO Database*, https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_053627 (last visited May 25, 2021). The SSURGO Downloader application, which is provided by Esri, allows users to download soils data. *See* Esri, *SSURGO Downloader*, https://www.arcgis.com/home/item.html?id=cdc49bd63ea54dd2977f3f2853e07fff (last updated Mar. 4, 2020). SSURGO is the best nationally available source for soils data. *See* NOAA Office for Coastal Mgmt., *Soil Survey Geographic Database*, https://coast.noaa.gov/digitalcoast/data/ssurgo.html (last updated Apr. 12, 2021).

Additionally, the model captures factors such as "hydrologic connectivity to traditional navigable waters [and] hydrologic permanence using stream classification." *Id.* at 5. Ultimately, the CWA Jurisdictional Scenario Model uses the input data and model criteria to generate results regarding the extent of protection of aquatic ecosystems under each scenario. During the public comment period for the 2020 Rule, many commenters alerted the Agencies to the CWA Jurisdictional Scenario Model and the 2019 GSS Study, emphasizing the applicability of the model for estimating the 2020 Rule's effect on Clean Water Act jurisdiction. The Agencies ignored this tool for quantifying the changes in jurisdictional coverage, while simultaneously claiming an inability to estimate changes in jurisdictional coverage (see *supra* Section I for examples).

The CWA Jurisdictional Scenario Model and scenarios were updated to reflect the 2020 Rule. Three federal regulatory scenarios are modeled: (1) a scenario based on criteria interpreted from new information released with publication of the 2020 Rule; (2) a scenario based on interpretation of criteria used in the 2019 Rule; and (3) a scenario based on interpretation of criteria provided in the 2015 Rule (Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. 37,054 (June 29, 2015)). *See* Ex. E, Decl. of Andrew G. Robertson, May 19, 2021 (attached to and in support of this brief) [hereinafter "Robertson Decl."] (providing a table comparing the model criteria used for these three regulatory scenarios).

As an example, the model results show that the 2020 Rule will have a significant negative impact in the more arid regions of the western United States, where there are high proportions of ephemeral streams. Several watersheds were analyzed using the updated model and modeling scenarios and were uploaded to Operation Dashboard applications, including: (1) Rio Penasco Watershed, New Mexico; (2) Rio Salado Watershed, New Mexico; (3) Roanwood Creek Watershed, Montana; and (4) South Platte Watershed, Colorado. (See Figure 1 for the model

output display for the Rio Penasco watershed.) The 2020 Rule scenario model results for the South Platte, Roanwood Creek, Rio Penasco, and Rio Salado watersheds in the western United States show significant negative impacts in the total kilometers of protected streams and rivers in each watershed, with 45, 74, 91, and 95 percent unprotected, respectively, a significant reduction compared to the coverage of the 2015 and 2019 Rules. There tend to be fewer wetlands in these more arid regions, but the model results also indicate that the 2020 Rule will have significant impacts on protection of these rare wetland habitats. The 2020 Rule scenario model results indicate that, for the South Platte, Rio Salado, Roanwood Creek, and Rio Penasco watersheds, 12, 49, 53, and 72 percent of total wetland acres will not be protected, respectively, a significant reduction compared to the coverage of the 2015 and 2019 Rules. Exs. A–D, Robertson Decl.

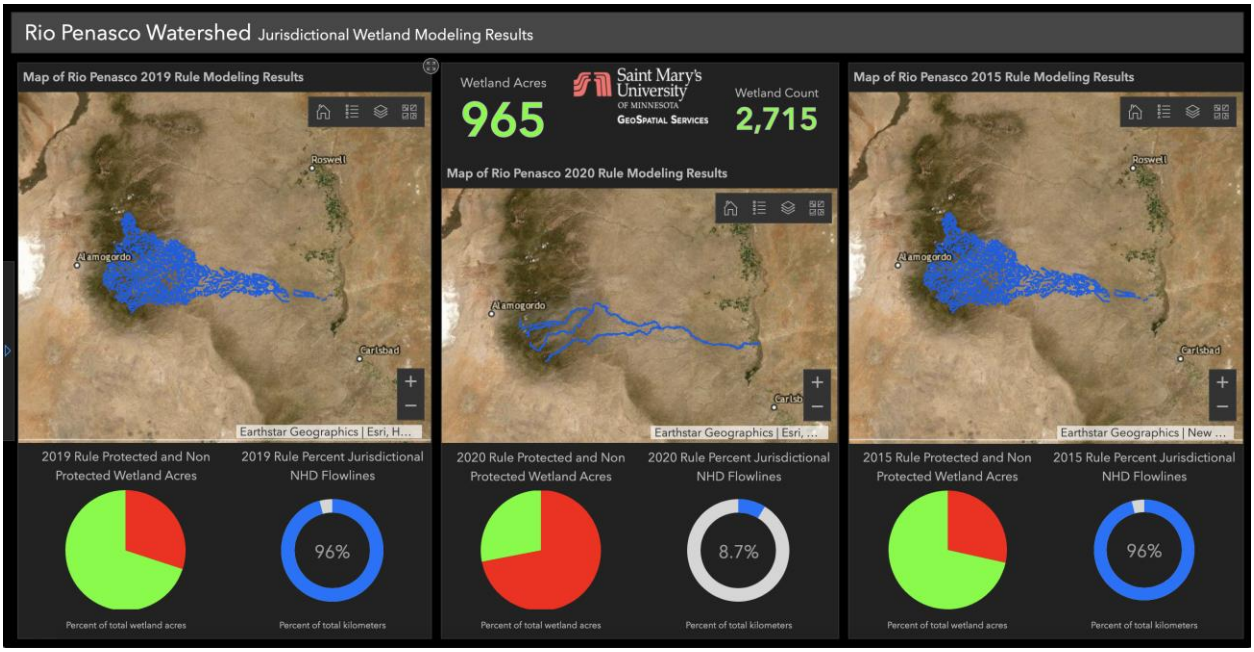

Figure 1. Graphic showing model output displayed in an Esri Operation Dashboard web application for the Rio Penasco Watershed, New Mexico. Source: GSS, *Rio Penasco Watershed Jurisdictional Wetland Modeling Results*, https://smumn.maps.arcgis.com/apps/opsdashboard/index.html#/0e4ef75cf3134bd3a8a78244772d1502 (last visited May 25, 2021).

These results are qualified, as they often are in scientific research. *See* GSS Report, *supra*, at 33–34 (explaining that appropriate use of the CWA Jurisdictional Scenario Model includes "[b]road-scale evaluation of environmental impact" but not delineations of individual wetlands). The modeling scenarios focused on the unambiguous differences between the various rules, such as the 2020 Rule's exclusion of ephemeral waters, one of the significant differences between the regulatory scenarios. The modeling scenarios focus on these types of clearly defined criteria because they offer decisionmakers a benchmark for understanding the change in jurisdictional scope between regulatory scenarios. As Figure 1 makes clear, the model shows the 2020 Rule greatly reducing CWA jurisdiction.

The Agencies attempt to evade their obligation to fully consider the 2020 Rule's impacts in part by questioning the NHD and NWI's usefulness. *See* The Navigable Waters Protection Rule: Definition of "Waters of the United States," 85 Fed. Reg. at 22,329. The Agencies acknowledge, however, that "the NHD and NWI are the most comprehensive hydrogeographic datasets mapping waters and wetlands in the United States and are useful resources for a variety of Federal programs, including CWA programs." *Id.* Indeed, the U.S. Army Corps of Engineers uses the NHD and the NWI as supporting sources to make jurisdictional determinations. *See* U.S. Army Corps of Engineers, *Approved Jurisdictional Determination Form* (Apr. 21, 2020), https://www.regulations.gov/document?D=EPA-HQ-OW-2018-0149-11699; U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* (Nov. 2010), https://www.sac.usace.army.mil/Portals/43/docs/regulatory/Final_Atlantic_and_Gulf_Coastal_Plain_Supplement_V2.pdf?ver=2019-06-06-143305-560. Furthermore, the EPA promotes the use of the NHD "for assigning reach addresses or catchment identifiers to water quality related entities, such as dischargers,

drinking water supplies, streams [a]ffected by fish consumption advisories, wild and scenic rivers, Clean Water Act Section 305(b) and 303(d) waterbodies, Designated Uses, etc." *See* U.S. EPA, *NHDPlus in WATERS*, https://www.epa.gov/waterdata/nhdplus-waters (last updated Mar. 11, 2019). The U.S. Fish and Wildlife Service also relies on the NHD to designate critical habitat under the Endangered Species Act.[11]

The CWA Jurisdictional Scenario Model is just one scientific tool that was available to the Agencies to estimate the likely magnitude of the reduction of Clean Water Act protection under the 2020 Rule.[12] The Agencies should have used this model or could have created and relied on their own model to estimate the changes resulting from the 2020 Rule. They did neither.

III. The Agencies' refusal to consider available science regarding the magnitude of the 2020 Rule's reduction in Clean Water Act jurisdiction and protections is arbitrary and capricious and is not in accordance with law.

The Agencies' refusal to consider the available science, and what that science demonstrated concerning the magnitude of loss of jurisdictional waters under the 2020 Rule, renders their action arbitrary and capricious, as well as not in accordance with law. As the CWA

[11] *See, e.g.*, Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Zuni Bluehead Sucker, 81 Fed. Reg. 36,762, 36,784 (June 7, 2016); Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Sharpnose Shiner and Smalleye Shiner, 79 Fed. Reg. 45,242, 45,255, 45,263, 45,271 (Aug. 4, 2014); Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Diamond Darter (*Crystallaria cincotta*), 78 Fed. Reg. 52,364, 52,377, 52,385 (Aug. 22, 2013).

[12] *See, e.g.*, Comment submitted by Steve Moyer, Vice President of Governmental Affairs, Trout Unlimited (TU) (Apr. 15, 2019) (using the NHD and peer-reviewed scientific studies to estimate that ephemeral stream miles make up approximately 50% of the nation's total stream miles). TU scientists have confirmed the magnitude of the reduction of Clean Water Act jurisdiction in a peer-reviewed paper. Kurt A. Fesenmyer et al., *Large portion of USA streams lose protection with new interpretation of Clean Water Act*, 40 Freshwater Sci. (published online Feb. 10, 2021) (attached as Exhibit F).

Jurisdictional Scenario Model demonstrates, the losses are astounding, and the concomitant effect on the chemical, physical, and biological integrity of the Nation's waters cannot simply be ignored in the rulemaking process. Ignoring such data runs directly counter to the mandates of *State Farm* and EPA's own regulations.

Any attempt by the Agencies to now rely on the Resource and Programmatic Assessment is misguided as both a matter of fact and law. The validity of the Agencies' action depends on the validity of the Agencies' contemporaneous rationale when issuing the 2020 Rule. *See SEC v. Chenery Corp.*, 318 U.S. 80, 95 (1943); *see also Dep't of Commerce v. New York*, 139 S. Ct. 2551, 2573 (2019) ("in reviewing agency action, a court is ordinarily limited to evaluating the agency's contemporaneous explanation in light of the existing administrative record"). In the 2020 Rule's preamble, the Agencies expressly stated that the 2020 Rule "is not based on the information in the agencies' . . . resource and programmatic assessment," and that the document was "not used to establish the new regulatory text for the definition of 'waters of the United States.'" The Navigable Waters Protection Rule: Definition of "Waters of the United States," 85 Fed. Reg. at 22,332, 22,335. The Agencies repeatedly emphasized that the information in the Resource and Programmatic Assessment (as well as the Economic Analysis) "was not used by the [A]gencies to help determine the extent of their authority under the CWA." U.S. EPA & Dep't of the Army, *Economic Analysis for the Navigable Waters Protection Rule: Definition of "Waters of the United States"* xi (Jan. 22, 2020). Taken at their word, the Agencies did not rely on the Resource and Programmatic Assessment to inform themselves about the scope and impact of the 2020 Rule. They cannot now attempt to do so retroactively.

To be sure, agencies may revise their regulations, but as the U.S. Supreme Court has repeatedly emphasized, when doing so, agencies must "articulate a satisfactory explanation for

[their] action[s]," provide a "reasoned analysis" for their decisions, consider all "relevant factors" in reaching their decisions, and explore "alternative way[s] of achieving" the purpose of their rules. *State Farm*, 463 U.S. at 42, 43, 48, 57. Conclusory statements that ignore readily available scientific information, and information in the rulemaking record, do not substitute for a satisfactory explanation or reasoned analysis. The 2015 Rule reflected the best available science about the connectivity and mechanisms by which streams and wetlands affect the chemical, physical, and biological integrity of downstream waters. The extensive scientific analysis in the Connectivity Report (U.S. EPA, Office of Research & Dev., *Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence* (Jan. 2015)), based on a review of over 1,200 peer-reviewed publications and supported by the EPA's Science Advisory Board, provided much of the technical basis for the 2015 Rule. *See* Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. at 37,057.[13]

In contrast, the preamble and supporting documents to the 2020 Rule provide only conclusory statements about how the final rule *might* contribute to the Clean Water Act's overall goals. For example, the Agencies offer no explanation about how removing the entire category of ephemeral streams from the definition of "waters of the United States" will restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The Agencies also offer no explanation about how removing protection for millions of acres of wetlands,[14] even those hydrologically connected to traditional navigable waters, will restore and maintain the chemical,

[13] Both the 2015 Rule and the Connectivity Report are part of the rulemaking record for the 2020 Rule.

[14] Comment submitted by American Fisheries Society et al. 5 (Apr. 10, 2019), https://www.regulations.gov/document?D=EPA-HQ-OW-2018-0149-4256; S. Mažeika Patricio Sulliván et al., *Distorting science, putting water at risk*, 369 Science 766, 766 (Aug. 14, 2020).

physical, and biological integrity of the Nation's waters. It is evident that the Agencies consciously disregarded the effect the 2020 Rule would have on water quality. As the EPA's own Scientific Advisory Board concluded, the proposed 2020 Rule "lacks a scientific justification, while potentially introducing new risks to human and environmental health[.]" SAB Commentary, *supra*, at 4.

CONCLUSION

The 2020 Rule eliminates Clean Water Act protection for many aquatic ecosystems and thus will cause irreparable harm to all Americans who benefit from and rely on the integrity of the Nation's waters. Science alone does not dictate Clean Water Act policy, but science cannot be disregarded. The Agencies failed to consider the extent to which their actions will reduce Clean Water Act jurisdiction by ignoring available scientific tools and data. Their failures were arbitrary and capricious and not in accordance with law, including the EPA's own regulations. As such, and for the foregoing reasons, *amici curiae* respectfully request that this Court grant Plaintiffs' motion for summary judgment.

Dated: May 28, 2021

Respectfully submitted,

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APPENDIX A

Descriptions of *Amici Curiae*

The **American Fisheries Society (AFS)** is the world's oldest and largest organization dedicated to strengthening the fisheries profession, advancing fisheries science, and conserving fisheries resources. AFS has over 8,000 members from around the world, including fisheries managers, biologists, professors, ecologists, aquaculturists, economists, engineers, geneticists, and social scientists. AFS promotes scientific research and sustainable management of fisheries resources. The organization publishes five of the world's leading fish journals and many renowned books, organizes scientific meetings, and encourages comprehensive education and professional development for fisheries professionals.

The **Association for the Sciences of Limnology and Oceanography (ASLO)** has been the leading professional organization for researchers and educators in the field of aquatic science for more than 60 years. ASLO's purpose is to foster a diverse, international scientific community that creates, integrates, and communicates knowledge across the full spectrum of aquatic sciences, advances public awareness and education about aquatic resources and research, and promotes scientific stewardship of aquatic resources for the public interest.

The **Coastal and Estuarine Research Federation (CERF)** is a multidisciplinary organization of individuals who study and manage the structure and functions of estuaries and the effects of human activities on these environments. CERF's members are dedicated to advancing human understanding and appreciation of estuaries and coasts worldwide, to the wise stewardship of these ecosystems, and to making the results of their research and management actions available to their colleagues and to the public.

The **International Association for Great Lakes Research (IAGLR)** is a scientific organization made up of researchers with a mission to advance understanding of the world's great lake ecosystems. IAGLR promotes all aspects of large lakes research and communicates research findings through publications and meetings. Its members encompass all scientific disciplines with a common interest in the management of large lake ecosystems on many levels. IAGLR's *Journal of Great Lakes Research* is a peer-reviewed publication with broad distribution.

The **North American Lake Management Society (NALMS)** is a non-profit organization of professionals and citizens. Founded in 1980, its mission is to forge partnerships among citizens, scientists, and professionals to foster the management and protection of lakes and reservoirs for today and tomorrow. NALMS seeks to identify needs and encourage research on lake ecology and watershed management, facilitate the exchange of information on aspects of managing lakes and their watersheds, promote public awareness of and encourage public support for management of lake ecosystems, offer guidance to agencies involved in management activities for lakes and their watersheds, and provide a forum for professional development and training.

The **Phycological Society of America (PSA)** was founded in 1946 to promote research and teaching in all fields of phycology. PSA publishes the *Journal of Phycology*, the premier journal

of research on phycology, and the *Phycological Newsletter*. PSA holds annual meetings, often jointly with other national or international societies of mutual member interest. The society also provides grants and fellowships to graduate student members.

The **Society for Ecological Restoration (SER)** is a leading international organization working to advance the science, practice, and policy of ecological restoration. Founded in 1988, SER works at the international, regional, and national levels, partnering with government agencies, intergovernmental organizations, NGOs, and the private sector to advance the science, practice, and policy of ecological restoration for the benefit of biodiversity, ecosystems, and humans. SER publishes the peer-reviewed bimonthly journal *Restoration Ecology*, as well as other resources and guidance regarding ecological restoration. SER has more than 3,000 members across the world including researchers, practitioners, decision-makers, indigenous people, and community leaders; its members are actively engaged in the ecologically sensitive repair and recovery of degraded ecosystems, including wetlands, rivers, and all types of freshwater and marine ecosystems.

The **Society for Freshwater Science (SFS)** is an international organization whose purpose is to promote further understanding of freshwater ecosystems (rivers, streams, lakes, reservoirs, and estuaries) and ecosystems at the interface between aquatic and terrestrial habitats (wetlands, bogs, fens, riparian forests, and grasslands). Its members study freshwater organisms, biotic communities, physical processes that affect ecosystem function, linkages between freshwater ecosystems and surrounding landscapes, habitat and water quality assessment, and conservation and restoration. SFS fosters the exchange of scientific information among its membership and with other professional societies, resource managers, policymakers, educators, and the public. The organization advocates for the use of best available science in policymaking and management of freshwater ecosystems.

The **Society of Wetland Scientists (SWS)** is a leading professional association of wetland and aquatic scientists around the world, including the United States. Established in 1980, SWS advances scientific and educational objectives related to wetland science and encourages professional standards in all activities related to wetland science. The society has over 3,000 members and publishes a peer-reviewed quarterly journal, *Wetlands*, concerned with all aspects of wetland biology, ecology, hydrology, water chemistry, soil, and sediment characteristics. SWS supports the use of the best available scientific information in making decisions on the use and management of wetland and aquatic resources.